

Amendment and Response

Applicant: Scott E. Jahns et al.

Serial No.: 10/763,861

Filed: January 22, 2008

Docket No.: M190, 113.101/P-9198.00

Title: VESSEL SEALING DEVICES

REMARKS

This is responsive to the Office Action mailed March 18, 2008. Claims 1-18, 20-29, and 48-57 were rejected. With this Response, claims 1, 21, and 48 have been amended. Claims 27 and 57 have been cancelled. Claims 1-18, 20-26, 28-29, and 48-56 remain pending in the application and are presented for reconsideration and allowance.

Claim Objections

Claim 57 is objected to because it is an exact copy of a previous claim, more specifically claim 54. Claim 57 is here cancelled.

Rejection of Claims 48, 50, 51, 55, and 56 under 35 U.S.C. § 102(b)

Claims 48, 50, 51, 55, and 56 were rejected under 35 U.S.C. § 102(b). Of these claims, claim 48 is independent and claims 50, 51, 55, and 56 depend from claim 48. With this response, claim 48 is amended to include the features of “a seal comprising a plurality of seal members. . . such that the plurality of the seal members are disposed in an interior of the blood vessel.” These features are not taught or made obvious in Diaz or the prior art of record. The plurality of seal members in Diaz includes one seal 120 for inside the wound and one seal 110 for outside of the wound. In each case, the seal closes and extends past the wound on its respective side. There is no suggestion in Diaz to include more than one seal member in that the unitary piece provides the effects necessary for wound closure. None of the other references teach or make obvious a “plurality of the seal members are disposed in an interior of the blood vessel” as set forth in the independent claim. Accordingly, removal of the rejection of claim 48 is respectfully requested.

Claims 50-51 and 55-56 depend from claim 48, and are patentable also by virtue of their dependency. Accordingly, removal of the rejection of claims 50-51 and 55-56 are also respectfully requested.

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Rejection of Claims 1-4, 9-12, 19, and 20 under 35 U.S.C. § 103(a)

Claims 1-4, 9-12, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz U.S. Patent No. 5,690,674 (“Diaz”) in view of Burbank et al. U.S. Patent No. 6,689,071 (“Burbank”).

Of these claims, claim 1 is independent and claims 2-4, 9-12, 19, and 20 depend from claim 1. Claim 1 has been amended to include the features of “the seal is attached to a tether independent of the cutting mechanism and configured to facilitate removal of the seal during or after anastomosis.” These features are not taught or made obvious in Diaz or Burbank. Diaz first does not concern anastomosis, and second does not include a removable seal attached to a tether. Burbank does not teach a seal or even a tether. Because at least the amended features are missing from each of the references separately, they cannot be found in any proposed combination of the references.

Accordingly, Applicants submit that claim 1-4, 9-12, and 20 are patentably distinguishable from the prior art and respectfully request removal of the rejection and for allowance of the claims.

Rejection of Claim 8

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of Burbank, as applied to claim 1, in further view of Fortune U.S. Patent Application No. 2004/0215231 (“Fortune”).

Claim 8 depends from claim 1, which has been shown above to be patentable over the combination of Diaz and Burbank.

Claim 8, by virtue of its dependency includes the features of “the seal is attached to a tether independent of the cutting mechanism and configured to facilitate removal of the seal during or after anastomosis.” As discussed above, these features are not included in Diaz or Burbank. These features are also missing from Fortune. Fortune teaches a device that is to be bound to the vessel, and thus the claimed feature of “removal of the seal” is not taught. Further, the seal members 11 and 12 extend past the opening enough that removal of these seals would cause damage to the vessel. Thus, because the claimed features are not taught or made obvious

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in Diaz, Burbank, or Fortune, these features would be missing from any proposed combination of the three references.

Applicants respectfully submit that claim 8 is patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claim 8.

Rejection of Claims 13-14

Claims 13-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of Burbank, as applied to claim 1, in further view of LeMole U.S. Patent No. 5,893,369 (“LeMole”).

Claims 13-14 depend from claim 1, which has been shown above to be patentable over the combination of Diaz and Burbank.

Claims 13-14, by virtue of their dependency include the features of “the seal is attached to a tether independent of the cutting mechanism.” As discussed above, these features are not included in Diaz or Burbank. These features are also missing from LeMole. Although LeMole teaches a block handle 304 coupled to the seal, the block handle is attached to a portion of the cutting mechanism, and thus is not “independent of the cutting mechanism.” Thus, because the claimed features are not taught or made obvious in Diaz, Burbank, or LeMole, these features would be missing from any proposed combination of the three references.

Applicants respectfully submit that claims 13-14 are patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claims 13-14.

Rejection of Claims 15-17

Claims 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of Burbank, as applied to claim 1, in further view of Blatter U.S. Patent No. 6,248,117 (“Blatter”).

Claims 15-17 depend from claim 1, which has been shown above to be patentable over the combination of Diaz and Burbank.

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Claims 15-15, by virtue of their dependency include the features of “the seal is attached to a tether independent of the cutting mechanism and configured to facilitate removal of the seal during or after anastomosis.” As discussed above, these features are not included in Diaz or Burbank. These features are also missing from Blatter. Blatter teaches an anvil 160 and piercing wire 150 combination that are used to pierce through and form an opening. Thus the sealing device 160 (as set forth in the Office Action) and wire do not meet the terms of the claims such as “a tether independent of the cutting mechanism.”

Further, Applicants respectfully traverse that the anvil 160 is a sealing device or that Blatter teaches a seal as set forth in the claims. In Blatter, the anastomosis is performed before the opening is cut, and thus has no need for “a seal for sealing an opening in the first blood vessel” as set forth in the claims. Once the anvil is removed in Blatter, bleeding from the opening is no longer a concern because the opening is in fluid combination with a lumen from the second vessel.

Thus, because the claimed features are not taught or made obvious in Diaz, Burbank, or Blatter, these features would be missing from any proposed combination of the three references.

Applicants respectfully submit that claims 15-17 are patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claims 15-17.

Rejection of Claims 21, 22, and 24-26

Claims 21, 22, and 24-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of LeMole.

Of these claims, claim 21 is independent and claims 22 and 24-26 depend from claim 21.

Claim 21 has been amended to include the features of “the seal when inflated is configured to include an inner chamber within a continuous surface across the opening of the blood vessel, and the surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal.” Diaz does not teach this feature because it does not teach the use of an inflatable seal. Further, LeMole does not teach this feature because the fluid within the seal does pass through the seal. Blatter has been cited against claim 27 (now canceled) as

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teaching an opening in the sealing member to pass a wire through the blood vessel. But none of the references teach or suggest the feature of “surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal” as required in the claims.

None of the references in the prior art of record include the amended features, and thus the amended features would be missing from any proposed combination of the reference including Diaz and LeMole.

Applicants respectfully submit that claims 21, 22, and 24-26 are patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claims 21, 22, and 24-26.

Rejection of Claims 23

Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of LeMole as applied to claim 21, in further view of Fortune.

Claim 23 depends from claim 2, which has been shown above to be patentably distinguishable from the combination of Diaz and LeMole.

Claim 23, by virtue of its dependency includes the of “the seal when inflated is configured to include an inner chamber within a continuous surface across the opening of the blood vessel, and the surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal.” As discussed above, these features are not included in Diaz or LeMole. These features are also missing from Fortune. Fortune also does not include a teaching of a “surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal.” The device of Fortune teaches a stalk but does not include a teaching that the stalk can be used to carry fluids. Even if the stalk was used to carry fluids, there is no teaching of an “inner chamber of the seal or delivering one or more fluids from the inner chamber” as set forth in the claim.

None of the references in the prior art of record separately include the amended features, and thus the amended features would be missing from any proposed combination of the reference including Diaz, LeMole, and Fortune.

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Applicants respectfully submit that claim 23 is patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claim 23.

Rejection of Claims 28-29

Claims 28-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz in view of LeMole, as applied to claim 21, in further view of Blatter.

Claim 27 was also included in this rejection in the Office Action, but has been cancelled and thus is not addressed here.

Claims 28-29 by virtue of their dependency include the of “the seal when inflated is configured to include an inner chamber within a continuous surface across the opening of the blood vessel, and the surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal.” As discussed above, these features are not included in Diaz or LeMole. These features are also missing from Blatter. As discussed above with respect to claim 21, Blatter has been cited as teaching an opening in the sealing member to pass a wire through the blood vessel. Blatter does not teach or make obvious the features of “surface includes at least one opening for delivering one or more fluids from the inner chamber of the seal” as required in the claims. Because at least these amended features are not taught in any of the references separately, they would be missing from any proposed combination of the reference of Diaz, LeMole, and Blatter.

Applicants respectfully submit that claims 28-29 are patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claims 28-29.

Rejection of Claim 49

Claim 49 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz as applied to claim 48, in further view of Fortune.

Claim 49 depends from claim 48, which has been shown above to be patentable over Diaz.

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Claim 48 has been amended to include the features of “to include the features of “a seal comprising a plurality of seal members . . . such that the plurality of the seal members are disposed in an interior of the blood vessel,” which by virtue of its dependency is also included in claim 49. As discussed above with respect to claim 48, these features are not taught or made obvious in Diaz. Fortune is similar in that it does not include these features. For example, the plurality of seal members in Fortune includes one seal 11 for inside the opening and one seal 12 for outside of the opening. There is no suggestion in Fortune to include more than one seal member inside the vessel. Because these features are missing from each of the references separately, they would be missing from any proposed combination of Diaz and Fortune.

Applicants respectfully submit that claim 49 is patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claim 49.

Rejection of Claims 52-54

Claims 52-54 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diaz as applied to claim 48, in further view of Blatter.

Claim 57 was also included in this rejection in the Office Action, but has been cancelled and thus is not addressed here. Claim 52-54 depend from claim 48, which has been shown above to be patentable over Diaz.

By virtue of their dependency, claims 52-54 also included the amended features of “to include the features of “a seal comprising a plurality of seal members . . . such that the plurality of the seal members are disposed in an interior of the blood vessel.” As discussed above with respect to claim 48, these features are not taught or made obvious in Diaz. Blatter teaches only a single anvil 160 for use in protruding the vessel. There is no suggestion that more than one anvil is needed as it could affect the structural rigidity of the anvil when the staples are applied.

Even if Blatter taught a plurality of sealing members, Applicants respectfully traverse that the anvil 160 is a sealing device or that Blatter teaches a seal. In Blatter, the anastomosis is performed before the opening is cut, and thus has no need for “a seal . . . for sealing an opening in the first blood vessel” as set forth in the claims. Once the anvil is removed in Blatter, bleeding

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from the opening is no longer a concern because the opening is in fluid combination with a lumen from the second vessel.

Applicants respectfully submit that claims 52-54 are patentably distinguishable from combination of references. Applicants also respectfully request removal of the rejection and allowance of claims 52-54.

Rejection of Claims 5-7

Claims 5-7 were indicated as rejected in the Office Action Summary, but were not discussed in the remainder of the Office Action. Claims 5-7 depend from independent claim 1.

The prior art of record does not teach or make obvious the amended features of claim 1, and therefore the references do not anticipate claims 5-7. Further, because the amended features of the claim are not found in any of the references separately, they cannot be found in any proposed combination of the references. Accordingly, Applicants respectfully submit that claims 5-7 are patentably distinguishable from the prior art of record and respectfully request allowance of the claims.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-18, 20-26, 28-29 and 48-56 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-18, 20-26, 28-29, and 48-56 are respectfully requested.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Rudy P. Hofmann at Telephone No. (612) 573-2010, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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By their attorneys,

Date: July 18, 2008

RPH:cms

/Rudolph P. Hofmann/

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